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ABSTRACT

The challenge in survey methodology is to conduct studies as effectively and efficiently as possible. The University of Newcastle upon Tyne (England) has taken advantage of information technology (IT) developments to improve the conduct of in-house surveys. A surveying mechanism tied to the library OPAC (online public access catalog), accessible by users both inside and outside the library, was devised to dispense with the pencil and paper approach of surveying users and provide responses instantaneously in machine readable form. The library implemented an electronic surveying system that allowed: determination of respondent identity; screen layout to be designed by the library; comparison of composition of sample with whole user population; automatic analysis of multiple choice responses; opportunity for users to quit the survey at any time to return to the OPAC; analysis of number of users quitting at each stage of the survey; and logging of users' locations when completing the survey. The first test of the electronic survey system achieved a response rate of less than 10%, with one-third of responses received from OPAC users outside the library. Low survey participation may be due to: (1) the survey period falling immediately before the examination period when students may have other time pressures; (2) people may not have realized the survey consisted of only five questions; and (3) patrons use the OPAC for a specific purpose, so when given the option to quit the survey to return to the OPAC, they do so quickly. An appendix shows sample survey screens. (SWC)

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The Use of IT in Library Evaluation: Electronic Surveying at the University of Newcastle

by Keith G. Webster

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The Use of IT in Library Evaluation: Electronic Surveying at the University of Newcastle

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> 'The right in-house study of the right issues at the right time is a valuable managerial resource for library administrators' (Rodger, 1989).

Many delegates at this conference will agree with these views, and a glance through any issue of *Library and information science abstracts* or *Library literature* will reveal many reported studies carried out by library managers. Much has been written on survey methodology; the challenge is to conduct such studies as effectively and efficiently as possible. This paper describes how the University of Newcastle upon Tyne has taken advantage of IT developments to improve the conduct of in-house surveys.

The University of Newcastle upon Tyne Library operates from three sites - the Robinson Library, which is the main library, and divisional libraries for Medicine and Dentistry and for Law. Together, these libraries serve a population of over 12,000 predominantly full-time students as well as several thousand academics, researchers and other staff and external borrowers. Reciprocal access arrangements with other local universities also exist.

In recent years, considerable efforts have been devoted to carrying out surveys to aid management decision-making, to inform objective setting and to review performance. In 1987, a university working party was established to review all academic services including the library. One particular question asked of the library was to provide:

> 'An indication of the Library's strategy in achieving a balance between quantity of service offered and quality of service offered' (McDonald, 1990).

The response to that question was informed by the range of strategies adopted by the library to assess the quality and quantity of services; including an evaluation of user reactions, complaints, suggestions and by conducting surveys. The ability to respond to the review confirmed the importance of in-house surveys and work in that area has been developed in recent years.

Surveys have been conducted, for example, into the pattern of library use of Sundays, to inform the selection of strategy to reduce issue desk queues, to evaluate the student induction programme, to survey attitudes to reading lists and to examine cross-use of library services between local university students.

However, these surveys were labour intensive. Questionnaires had to be distributed and collected, the results collated and tabulated. Interviews had to be conducted and the results written up. Further, people who came into the library had traditionally been surveyed, and it was desirable to try to reach people elsewhere on campus.

An approach was sought where surveys could be conducted using computers. Newcastle University Library has a long history of innovation in the use of information technology and a computer application to improve surveys was seen as a natural development. Such a move would dispense with the pencil and paper approach and provide responses instantaneously in machine readable form. It was decided to develop a surveying mechanism which could be tied to the library OPAC, as many people, both inside and outside the library, are regular OPAC users.

What was envisaged was a facility where a sample of OPAC users would be presented with a survey screen when first accessing the OPAC. A specification was submitted to Geac, suppliers of the Advance library automated system used by Newcastle University, to develop an electronic surveying facility.

The specification set out several requirements:

- An ability to determine the respondent's identity, from name or borrower number
- Facility for the library to design the screen layout
- Ability to compare composition of sample with user population as a whole
- Automatic analysis of multiple choice responses
- Facility for users to quit survey at any time to return to the OPAC
- Analysis of the number of users quitting at each stage of the survey
- Logging of users' locations when completing the survey.

The Electronic Surveying Package

From the above specification Geac developed software to incorporate into the Advance OPAC. Three aspects of the surveying package are considered below: creating surveys, the user interface and survey analysis.

CREATING SURVEYS

Surveys are created within the Advance menu structure used by library staff. The first step is to record a description of the survey and to set any start and finish dates. These dates are optional, but do allow surveys to be created before they are required and to come into use on the appropriate date. A 'random factor' is then selected - this determines the frequency with which the survey is offered to OPAC users. Whenever a valid access is made to the OPAC a counter is increased by 1 and then divided by the random factor. Whenever the remainder of this calculation is zero the survey is displayed. Therefore, if the survey was to be administered to every user, the factor would be set at one; for every tenth user the factor would be ten.

The system allows acceptable users' locations to be pre-determined. For example, if OPAC users in the Robinson Library only were to be surveyed, this could be requested.

After these general points have been completed, the questionnaire can be created.

The first element of the questionnaire is an opening screen which sets out the nature and purpose of the survey, and can be used, for example, to thank users for their help and explain why the survey is being conducted. The welcome screen is entirely free text. The second element is a prompt for the user's identity. This is a divergence from practice in many paper-based questionnaires where confidentiality is assured, but has been adopted to allow a comparison to be made between sample size and user population, and to minimise opportunities for anyone to complete the questionnaire more than once.

User identities can be entered in a number of ways:

- By borrower number - the system checks its validity and prompts for a new number if necessary
- By name - must be alphabetic and have text before and after a comma eg. Smith, John

Whilst it is impossible to prevent silly names being entered, every effort is made to restrain practical jokers!

These two elements (Introductory screen and User ID) must be completed before any questions can be entered.

The electronic surveying package permits a number of question types to be established:

- Free-text where the responder can enter anything
  (eg. What single improvement would you make to the library?)
- Questions with Yes/No responses
  (eg. Are our opening hours adequate for your needs?)
- Numeric questions
  (eg. How many books do you have on loan at present?)
- Multiple-choice
  (eg. Which of the following extensions to opening hours would you prefer?
  a. Saturday evening
  b. Sunday morning
  c. Sunday evening)
- Dates
  (eg. When did you last visit the library?)

THE USER INTERFACE

Whenever a user begins a new OPAC search the system retrieves a list of existing surveys - it is possible to hold a range of surveys at any one time. The system will check the various elements mentioned above: start and finish dates and users' location. Assuming that all of these restrictions are complied with, the system determines whether or not the questionnaire should be displayed using the frequency counter.

The user prompts at the foot of each screen are presented and used in the same way as those with which OPAC users are familiar. There are two prompts which appear on every screen: quit and help. Quit is self-explanatory but nonetheless important. People using the OPAC generally do so with the intention of consulting the library's catalogue and not to complete a questionnaire, and it is unlikely to foster good relations if people are forced to complete the questionnaire before they can conduct their search. Help on completing the survey is available at any stage from screens which explain to users how to move about the survey and change answers if required. However, it is not possible to amend the user ID response.

On completion, the survey response is filed, and identified by either user name or borrower number. This is important, because if someone is presented with a survey and enters an identity which is already

held on file, they are informed that they have already completed the questionnaire, and returned to the OPAC search screen.

SURVEY ANALYSIS

Each completed survey response is allocated particular data about the date and time of completion, the user's ID and the location at which the response was prepared. At present, the software generates three reports to aid survey analysis.

The first is the summary of survey control data which reports:

- The survey's dates
- The number of times the questionnaire was presented
- The number of times the questionnaire was completed
- The number of users who did not complete the survey - and the number of times quit at each question
- Number of users identified by borrower no.
- Number of users identified by name
- Number of respondents identified as non-members.

The second report offers a summary analysis of responses:

- For multiple choice questions, total numbers are shown for each possible selection
- For free text questions, each response is listed.

Thirdly, the summary of survey respondents:

- Provides a response by response analysis showing respondent's name or borrower number and the time, date and location of completion. It then sets out the user's response to each question.

The Results to Date

The first live survey was carried out between 24 April and 5 May 1995, and looked at two themes: opening hours and a general study of desired changes or additions to the library's services. The questionnaire contained both multiple choice and free text questions. Copies of the survey screens may be found in Appendix 1.

The questionnaire was presented 1,639 times; from which 150 completed responses were received. The majority of non-respondents quit before entering their name or borrower number. One-third of responses were received from OPAC users outside the library.

First Impressions

DRAWBACKS

There were a high number of non-respondents. The survey was presented over 1600 times, but only 150 usable responses were gathered. A completion rate of less than 10% would be regarded as a disaster for many traditional questionnaires.

The poor response rate can have several explanations:

- The survey was carried out at the start of the final term, just before the examinations period, when people were likely to have other pressures on their time.
- People may not have realised that the questionnaire consisted of only five questions, and didn't want to embark upon an unknown exercise. This is something which we will remedy in the introduction screen of future surveys.
- People use the OPAC for a specific purpose - to search for catalogue records - and when given an easy option to quit and return to OPAC use, chose to do so quickly.

After a day or so it was realised that the sample frequency would have to be shortened to gather sufficient responses.

The second problem was the disproportionate number of network accesses, from people using the OPAC in their office or laboratory. This could clearly skew the results in favour of academics and researchers who are the principal users of network access to the OPAC. It would be important to compare the sample population to the entire user community.

There are a number of possible explanations for this problem. People on campus perhaps have more time and are happier to spend a minute or two completing a questionnaire. Perhaps 'senior' users have a longer term perspective on library use. There is one system-related explanation for this observation - users logging in from the network enter the OPAC through the menu structure. In the library, users often walk away from the OPAC mid-search. The next user may then take over without returning to the home page which triggers the survey process. In this way, new OPAC users may be missed.

For the first survey, considerable time was required to set up the screens and test the survey package. It is to be hoped that future surveys can be created rather more quickly.

ADVANTAGES

Although the creation of the questionnaire was time consuming this was more than offset by the time saved by the automatic analysis of responses.

Surveying user opinion always seems to generate positive publicity, as a demonstration of commitment to reviewing and improving services.

Future Developments

It is intended to continue surveying, probably once a term. Any reduction or increase in the problems outlined above will be monitored closely, and steps will be taken to reduce or remove their impact.

At the same time, a new package - Libra - will be tested. Libra is a PC-based qualitative survey package designed specifically for use in libraries. It is believed that Geac surveying and Libra will complement each other nicely, and may compensate for any respective sample bias. Libra will gather a more representative sample of users, whilst Geac will continue to reach people outside the library building.

Further guidance on assessing user satisfaction with library services will be issued by the Higher Education Funding Councils in due course. It is to be hoped that whatever framework is finally proposed, IT applications may be used to gather at least some of the required data.

Traditional surveys will not disappear; there is a continuing need to survey services and facilities which have no direct link to OPAC users. However, developments such as those described in this paper make a valuable contribution to the gathering and analysis of valuable user opinion.

References

McDonald, A. C. (1990) 'Strategies for achieving a balance between the quality and quantity of service in an academic library'. In *Quality assurance and customer care*, edited by Maggie Ashcroft and Alex Wilson. Stamford: CPL. p.26

Rodger, Eleanor Jo (1989) 'The right study of the right issues at the right time: conducting in-house studies in public libraries'. *Library trends* 38, Fall. p.313

Appendix 1

Sample survey screens

31 AUG 1995 Geac ADVANCE Library System (5.4.4) DEFAULT NU
14:02 Newcastle University Library

QUESTIONNAIRE
Page 1 of 3
LIBRARY OPENING HOURS

The University Library aims to provide the highest standards of service for all users. As an integral part of that process the Library will ask the opinion of its users on the services offered and, within available resources, will respond positively to the information received. Library users should expect a courteous service at all times, and comments on the service received and suggestions for improvement are always welcome.

In order to help us improve our services, please answer the five questions below. You may enter "Q" or "q" at any time to leave the questionnaire and return to the catalogue.

Please enter the number from your Library card (with no spaces and letters in upper case e.g. U13040156) or your name (in the format Last name, First name e.g. Smith, Jane)

Q to Quit, '?' for help on completing the survey

31 AUG 1995 Geac ADVANCE Library System (5.4.4) DEFAULT NU
14:02 Newcastle University Library

QUESTIONNAIRE
Page 2 of 3

1. If opening hours were to be extended (from 9am-9pm Mon-Fri, 9-4.30pm Sat, 11-4.30pm Sun (Robinson Library only)), when would you like it to be? Please indicate your choices in order of preference :

A. 9.00 - 10.00 pm weekday evenings
B. 4.30 - 7.00 pm Sundays (Robinson)
C. 9.00 - 11.00 am Sundays (Robinson)
D. 4.30 - 7.00 pm Saturdays

2. If you would prefer the Library to be open at some other time, please give details below :

Q to Quit, '?' for help on completing the survey

31 AUG 1995 Geac ADVANCE Library System (5.4.4) DEFAULT NU
14:02 Newcastle University Library

QUESTIONNAIRE
Page 3 of 3

3. In order to extend opening hours as indicated above, when would you prefer the Library to close? Please indicate your choices in order of preference :

A. 5.00 - 10.00 pm Fridays
B. 9.00 - 12 noon Saturdays
C. No further closing

4. If you would prefer the Library to close at some other time, please give details below :

5. Which single change or addition to the University Library service would you like to see implemented ?

Thanks for your assistance
Q to Quit, '?' for help on completing the survey